Testimony of Virinder Moudgil to the House Commerce Standing Committee
Representative Bill Huizenga, Chair

June 16, 2005

Mr. Chairman and other members of this committee:

Thank you for the opportunity to address you today regarding the bonding proposals currently under your consideration. My name is Virinder Moudgil, vice president of academic affairs, provost and a tenured professor of biological sciences at Oakland University.

Let me begin by stating how pleased we are that our state elected officials are moving in this direction to identify and support research, emerging technologies and commercialization activities. As you know, many other states have either already done so, or are seriously considering similar initiatives.

We are all in agreement that Michigan needs to diversify its economy, create more jobs and become more competitive in the 21st Century. Support and passage of a bond proposal for this expressed purpose is one way to jumpstart our economy, create jobs and make Michigan a better place to live, work and raise a family.

My primary objective for testifying before this committee is to publicly express our support for initiatives such as this and to demonstrate how Oakland University has the knowledge and expertise to be a major contributor to this effort.

I'd like to briefly share with you background information about the university I proudly represent.

Founded in 1957 as a branch of Michigan State University, Oakland University became fully independent in 1970 when the Michigan Legislature granted it autonomy.

Located in northern Oakland County and adjacent to Macomb County, Oakland University is approximately 30 miles north of Detroit and 30 miles south of Flint, and is easily accessible to millions of Michigan residents.

Today, with nearly 17,000 students, it is the 8th largest and one of the fastest growing of the 15 public universities in Michigan.

Nearly 96% of our students are from Michigan; most of them stay in the area after graduation contributing to the state and local economies.

Although Oakland University is relatively young and smaller than the state's major research institutions, we consistently rank higher than most universities of our size in key areas such as engineering and the sciences.

And, as this document prepared by the House Fiscal Agency indicates, we rank 6th in peer-reviewed federally funded science and engineering related research dollars, therefore outperforming relative to our size.

I'd like to now take a few moments to share with you a few examples of the cutting-edge research and emerging technology that some of our faculty members are engaged in that could contribute to the goals and outcomes of the bond proposal if approved by the Legislature and public:

More than 10 of our faculty members engaged in the Life Sciences have 20 years or more with uninterrupted funding from the National Institute of Health. One of them, Yang Xia, professor of physics, recently was awarded a $2.1 million NIH grant to help improve the quality and ability of clinical Magnetic Resonance Imaging (MRIs) to provide detail that could offer early diagnosis for debilitating diseases.

Other areas of faculty engagement include anti-bioterrorism, aviation sciences and applied and basic research. Jennifer Froelich, chemistry major, was one of four Michigan students selected as Homeland Security Scholars in 2003 by the U.S. Department of Homeland Security.

Specific research activities and initiatives include:

- **The Center for Biomedical Research**, a research component of the College of Arts and Sciences provides core support for Biomedical Research in academic and industrial settings serving as a regional center comprising basic, applied and clinical research at Oakland University in collaboration with area corporations and industry, including Henry Ford Hospital and Beaumont Hospital. Nearly fifty-six members of the Center are engaged in independent and collaborated research funded mainly by the National Institutes of Health (NIH), the National Science Foundation (NSF) and other agencies.

  The Center collaborates with public and private organizations in the region and is positioned to play a significant role in the Michigan Life Sciences Corridor and Automation Alley to promote technology transfer.

  The Center's areas of expertise include eye diseases such as cataracts, glaucoma and retinopathy, breast cancer and gene susceptibility to cancer, noninvasive biomedical techniques in the diagnosis of stroke, osteoarthritis and cartilage damage, epilepsy, migraine headaches, mathematic modeling for understanding electric stimulation and defibrillation, cardiovascular health and

role of hormones in hypertension, chemical toxicology, radiation and living systems.

The Center also supports future entrepreneurs by providing research assistantships at the masters and doctoral levels to students working at Oakland and other locations on projects in biomedical research. A large number of our graduates from these research programs serve Michigan and support its economy by working as physicians, nurses and researchers in hospitals and the pharmaceutical industry. Others are engineers at Michigan businesses and corporations.

Members of the Center have received nationwide recognition including Dr. Michael Chop's research on stroke as "one of the ten advances in 2002" by the American Heart Association. Dr. Chintala's work in vision research was acknowledged by the New York Times in 2001 as one of the top advances in glaucoma research.

- The Founder of Oakland University's **Eye Research Institute**, the only one of its kind in Michigan not affiliated with a Medical School, was a recipient of the prestigious Lasker Awards for Basic and Clinical Medical Research and Public Service. The award seeks to raise public awareness of the enormous value of biomedical research to a healthy society. Another faculty member was nominated for the Nobel Prize in Medicine for his work on measuring nanolevels of chemical signals in cardiovascular system.

- Oakland University's Beaumont **Graduate Program of Nurse Anesthesia** has been recognized as sixth in the United States in the 2004 edition of "U.S. News and World Report's America's Best Graduate Schools." The program, which provides an exceptional educational environment for training certified registered nurse anesthetists (CRNAs), started in 1991 as a collaborative initiative to address the nurse anesthesia shortage. Presently, 43 percent of Beaumont's CRNA staff are graduates of the program.

Other noted research centers at the university include:

- The **Fastening and Joining Research Institute**, a one-of-a-kind facility that increases the safety and security of bolting systems, adhesive bonding, robotic welding and advanced riveting technology for the military, automotive, aerospace, nuclear-power and transportation industries.

- **The Center for Robotics and Advanced Automation,** which has a solid record of accomplishments in basic and applied research through collaborative programs with local industry and national and international research

organizations, as well as active technology transfer and commercialization programs.

- **The Product Development and Manufacturing Center**, an internationally recognized center that provides education, applied research and technology transfer to the automotive industry.

Oakland University is clearly positioned to successfully compete for funds as outlined in both bond proposals.

For this reason, we would like to have Oakland University added to the list of state universities with representation on the Steering Committee Advisory Board. Oakland University's mission, areas of expertise and geographic area are very different from the other institutions, which will allow us to bring a unique perspective to the Board.

Mr. Chairman: I sincerely appreciate the time you have given me, and I will be happy to answer any questions that you or other members of the committee might have.